DOCUMENT RESUME

ED 082 005 CE 000 277

AUTHOR	Shenk, Faye
TITLE	Predictability of Expressed Career Intent.
INSTITUTION	Air Force Human Resources Lab., Lackland AFB, Tex. Personnel Research Div.
REPORT NO	AFHRL-TR-72-25
PUB DATE	Mar 72
NOTE	18p.
AVAILABLE FROM	National Technical Information Service, Springfield, Va. 22151 (AD-749 093)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Armed Forces; Career Choice; *Career Planning; Longitudinal Studies; *Military Personnel; *Occupational Choice; Prediction; *Predictive Validity

ABSTRACT

An historical study of officer input from the various Air Force commissioning programs was initiated in 1963. The study was designed to determine the predictability of an Air Force officer's career decision and to evaluate relationships between career intent and demographic, environmental, and attitudinal factors. Career-intention information for this group has been compiled for the period prior to commissioning up to five years of active duty. This report presents a description of the career-intent statement reliability and validity with career status as of December 1969. Subjects entering the Air Force through the Officer Training School"Airmen Education and Commissioning Program and Officer Candidate School had the highest percentage of officers remaining on active duty. Correlations between precommission career intent and the criterion were generally low; however, there was a consistent increase in predictability for data from succeeding years. (Author)

ED 082005

DOD
AC

AD 749 093

PREDICTABILITY OF EXPRESSED CAREER INTENT

Faye Shenk

Air Force Systems Command
Brooks Air Force Base, Texas

March 1972

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

FILMED FROM BEST AVAILABLE COPY

CE 000 277

AIR FORCE
SCIENTIFIC RESEARCH
AD 749068
ED 082005

AFHRL-TR-72-25

PREDICTABILITY OF EXPRESSED CAREER INTENT

By
Faye Shenk

PERSONNEL RESEARCH DIVISION
Lackland Air Force Base, Texas

DDC
RECEIVED
OCT 10 1972
B

March 1972

Approved for public release; distribution unlimited.

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

LABORATORY

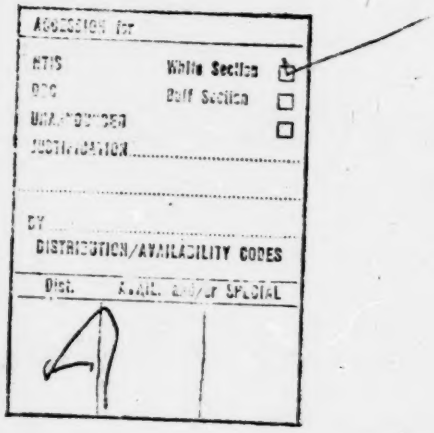
AIR FORCE SYSTEMS COMMAND

BROOKS AIR FORCE BASE, TEXAS

17

NOTICE

When US Government drawings, specifications, or other data are used for any purpose other than a definitely related Government procurement operation, the Government thereby incurs no responsibility nor any obligation whatsoever, and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise, as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.



C&MS: 3977, 4057

Unclassified

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) Personnel Research Division Air Force Human Resources Laboratory Air Force System Command Lackland Air Force Base, Texas 78236	2a. REPORT SECURITY CLASSIFICATION Unclassified 2b. GROUP

3. REPORT TITLE

PREDICTABILITY OF EXPRESSED CAREER INTENT

4. DESCRIPTIVE NOTES *(Type of report and inclusive dates)*

5. AUTHOR(S) *(First name, middle initial, last name)*

Faye Shenk

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
March 1972	17	5

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO. 7719 c. Task No. 771907 d. Work Unit No. 77190727	AFHRL-TR-72-25 9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*

10. DISTRIBUTION STATEMENT

Approved for public release; distribution unlimited.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	Personnel Research Division Air Force Human Resources Laboratory Air Force Systems Command Lackland Air Force Base, Texas 78236

13. ABSTRACT

An historical study of officer input from the various Air Force commissioning programs was initiated in 1963. The study was designed to determine the predictability of an Air Force officer's career decision and to evaluate relationships between career intent and demographic, environmental, and attitudinal factors. Career-intention information for this group has been compiled for the period prior to commissioning up to five years of active duty. This report presents a description of the career-intent statement reliability and validity with career status as of December 1969. Subjects entering the Air Force through the Officer Training School–Airmen Education and Commissioning Program and Officer Candidate School had the highest percentage of officers remaining on active duty. Correlations between precommission career intent and the criterion were generally low; however, there was a consistent increase in predictability for data from succeeding years.

DD FORM 1 NOV 65 1473

Unclassified

Security Classification

I-A

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
career intent retention USAF Officer Active Duty Survey career attitudes						

AFHRL-TR-72-25 March 1972

PREDICTABILITY OF EXPRESSED CAREER INTENT

By
Faye Shenk

Approved for public release; distribution unlimited.

PERSONNEL RESEARCH DIVISION
AIR FORCE HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND
Lackland Air Force Base, Texas

I-C

FOREWORD

This research was completed under Project 7719, Air Force Personnel System Development on Selection, Assignment, Evaluation, Quality Control, Retention, Promotion, and Utilization; Task 771907, Analysis of Major Factors Related to Career Decisions and Retention.

This report is part of a series in a continuing evaluation of a sample of officers who entered the Air Force during 1963 and 1964 as second lieutenants. This longitudinal study was designed to evaluate reported career intentions and various demographic, environmental, and attitudinal factors which influence career selection or nonselection. Other reports in this series include PRL-TR-65-2, *USAF Officer Career Decisions: Predictability of Initial Career Intent*; PRL-TR-67-10, *USAF Officer Career Intent after First Year of Active Duty*; AFHRL-TR-69-33, *Career Indications among Junior Officers*; AFHRL-TR-70-49, *Changes in Career Intent During Initial Tour of Active Duty*.

This report has been reviewed and is approved.

George K. Patterson, Colonel, USAF
Commander

ABSTRACT

An historical study of officer input from the various Air Force commissioning programs was initiated in 1963. The study was designed to determine the predictability of an Air Force officer's career decision and to evaluate relationships between career intent and demographic, environmental, and attitudinal factors. Career-intention information for this group has been compiled for the period prior to commissioning up to five years of active duty. This report presents a description of the career-intent statement reliability and validity with career status as of December 1969. Subjects entering the Air Force through the Officer Training School–Airmen Education and Commissioning Program and Officer Candidate School had the highest percentage of officers remaining on active duty. Correlations between precommission career intent and the criterion were generally low; however, there was a consistent increase in predictability for data from succeeding years.

TABLE OF CONTENTS

		Page
I.	Introduction	1
II.	Procedure	1
III.	Results	1
IV.	Conclusions	8
	References	9

LIST OF TABLES

Table		Page
1	Distributions for Career Status Groups of Officers Completing Career-Intent Surveys	2
2	Percentages of Commissioning Source Subsamples and Total Sample Indicating Favorable and Unfavorable Attitudes Toward an Air Force Career on Precommissioning and Yearly Surveys	3
3	Intercorrelations Between Career-Intent Statements for Surveys Administered at Two Points in Time and Between Career Intent and Career Status as of December 1969	7

LIST OF FIGURES

Figure		Page
1	Percentages of total sample indicating favorable and unfavorable attitudes toward an Air Force career on precommissioning and yearly surveys	4
2	Percentages of commissioning source subsamples indicating favorable attitudes toward an Air Force career on precommissioning and yearly surveys	5
3	Percentages of commissioning source subsamples indicating unfavorable attitudes toward an Air Force career on precommissioning and yearly surveys	6
4	Correlations between career-intent statements and career status	8

Preceding page blank

PREDICTABILITY OF EXPRESSED CAREER INTENT

I. INTRODUCTION

In 1963 an historical study of officer input from the principal Air Force commissioning sources was initiated (Ewing, Short, 1965). This study has three objectives: to determine the stability of career intent through the initial obligated tour of active duty; to examine relationships between career intent and background characteristics; and to examine relationships of attitude changes to performance, service life experience, job satisfaction, and actual selection of an Air Force career.

II. PROCEDURE

The original sample ($N = 5,609$) was selected from officers scheduled to enter the Air Force during 1963 and 1964 as second lieutenants. The sample consisted of officer trainees and newly commissioned officers from the Air Force Reserve Officer Training Corps (AFROTC), Officer Training School (OTS), Officer Training School – Airman Education and Commissioning Program (OTS-AECP), Officer Candidate School (OCS), Air Force Academy (AFA), United States Military Academy (USMA), and United States Naval Academy (USNA). The sample was homogeneous with respect to length of service and grade.

Questionnaires were used to accumulate data from individuals in the initial sample. The subjects were surveyed before they entered active duty and then resurveyed each year through five years of active military service. Information on the sample has been compiled and intermediate results, using expressed career intent as the intermediate criterion, have been published (Ewing, 1967; Shenk, 1969; Shenk, 1970).

Career status was determined for these subjects by matching with the Uniform Officer Record (UOR) Active Duty and Loss Tape Files as of December 1969. After matching with the UOR tape files, the subjects were divided into the following categories: Career, Noncareer, Inactive, and Unknown. The Career group represents subjects who were still on active duty as of December 1969.[1] The Noncareer group represents subjects who had a date of loss between 1963 and 1969. Inactive cases are those which were in a transition stage on the UOR Files.[2] Finally, the Unknown represent subjects for whom initial data were missing (such as AFSN) and for whom no match was made on the UOR tape files.

III. RESULTS

The number and percentage of subjects in each of the groups (Career, Noncareer, Inactive, and Unknown) are shown by source of commission and for the total sample in Table 1. Fifty-three percent of the original total sample were identified as Career (on active duty in December 1969), and 36 percent of this sample were confirmed as Noncareer (lost to the Air Force). In addition, 4 percent of the total group were classified Inactive and 7 percent Unknown. The largest percentage of subjects in the Unknown group were AFROTC cadets who had missing information in the precommission phase of the study. Among the various commissioning sources, OTS-AECP and OCS had the largest percentages of subjects still on active duty (88 percent and 70 percent, respectively) at the completion of a normal tour of duty.[3] This is significant in that these sources represent officers who have had prior military service and who may have attained their college degree through an Air Force sponsored program. The various military academies showed the next highest percentages of subjects in the Career group (AFA, 65 percent; USMA, 62 percent; USNA, 59 percent); AFROTC and OTS followed with 53 percent and 46 percent still on active duty. These data provide an estimation of retention for a specific input sample (1963 and 1964) as of December 1969, by which

[1] Subjects who were still on active duty (Career group) may have incurred additional obligations, but for this report they were termed "career" if they were still in the Air Force, having completed more than five years of active duty.

[2] Records for subjects were in the process of being changed or deleted; e.g., a subject may have been verified as a "loss," therefore deleted from the Active Duty File but not yet added to the Loss File.

[3] Normal tour of duty refers to a four-year obligation except for subjects who enter training programs, such as pilots and navigators, who would have a five-year obligation.

Table 1. **Distributions for Career Status Groups[a] of Officers Completing Career-Intent Surveys**

(As of December 1969 UOR Active Duty and Loss Files)

Source of Commission	Career		Noncareer		Inactive		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%
AFA	288	65	130	29	24	5	0	-	442	99
OTS	684	46	736	50	30	2	34	2	1,484	100
OTS-AECP	111	88	13	10	1	1	1	1	126	100
AFROTC	1,760	53	1,087	33	146	4	345	10	3,338	100
USMA	30	62	18	38	0	-	0	-	48	100
USNA	33	59	20	36	3	5	0	-	56	100
OCS	80	70	24	21	1	1	10	9	115	101
Total	2,986	53	2,028	36	205	4	390	7	5,609	100

[a]Groups are defined as follows: Career—on active duty as of December 1969; Noncareer—date of loss between 1963 and 1969; Inactive—in transition stage on UOR files; Unknown—initial data missing, no match on UOR files.

Note. — Surveys were sent to the AFA, USMA, and USNA cadets scheduled to graduate in June 1963. OTS subjects began with Class 63-H. OCS subjects were the last class (63-D) which graduated in June 1963. AFROTC subjects were Air Science IV cadets scheduled to graduate between January and June of 1964. The relatively large number of AFROTC subjects in the unknown category is partly a function of subjects who had an educational delay, subjects eliminated from the AFROTC program, and subjects without AFSN identification.

time the subjects would have completed a normal tour of active duty. Comparisons are made for the total sample and for the various sources of commission.

One of the aims of the present study was to determine the magnitude of career interest of officers at the moment of entry to active duty and to determine the predictability of expressed career intent. In each of the surveys the subjects were asked to indicate their attitude toward an Air Force career on a five-point scale from "Definitely intend to make a career in the Air Force" to "Definitely do not intend to make a career in the Air Force." In this way, expressed career intent of the officers was obtained each year from the point prior to commissioning up to five years of active duty.

Table 2 gives the percentage of favorable (*i.e.*, "definitely" or "most likely" career-minded) and unfavorable (*i.e.*, "most likely not" or "definitely not" career-minded) attitudes toward an Air Force career for each year's survey by source of commission and for the total group. The percentages for Career and Noncareer subjects are presented for comparison. These data are also presented graphically in Figures 1 through 3.

For the total sample, the data generally show a decline in favorable career attitudes from the precommissioning point through the third year of active duty. From the third year of active duty, the percentage of total subjects with favorable attitudes increased through the fifth year of active duty. The percentage of subjects in the total sample with favorable attitudes was generally lower than the percentage of subjects who remained on active duty. In other words, the percentage of individuals who remained on active duty was higher than the percentage one would estimate based on the number of subjects indicating they had favorable attitudes toward a military career. There was a steady increase in percentage of all subjects with unfavorable attitudes through the third year with a slight increase at the fourth-year point and a drop at the fifth-year point. The fluctuation in unfavorable attitudes between the fourth and fifth year of active duty may have been a function of normal attrition. In other words, those officers with a date of separation who had indicated an unfavorable career attitude left the Air Force after completing their four-year active duty commitment. As illustrated in Figure 1, the percentage of subjects with unfavorable attitudes very closely approximated the percentage of noncareer subjects at the third-year point. Since this was also the point in time at which the percentage of favorable attitudes began to increase steadily, it may be an indication of a critical decision point. These data are presented for each source of commission in Figures 2 and 3. Subjects from the OTS-AECP and OCS sources accounted for the highest percentages

Table 2. **Percentages of Commissioning Source Subsamples and Total Sample Indicating Favorable and Unfavorable Attitudes Toward an Air Force Career on Precommissioning and Yearly Surveys[a]**

Source of Commission	Precommission (N = 5,396)		1st yr (N = 4,357)		2d yr (N = 3,097)		3d yr (N = 4,136)		4th yr (N = 3,880)		5th yr (N = 3,075)		Total Sample (N = 5,609)	
	Favorable	Unfavorable	Favorable	Unfavorable	Favorable	Unfavorable	Favorable	Unfavorable	Favorable	Unfavorable	Favorable	Unfavorable	Career	Noncareer
AFA	78	3	76	6	67	11	51	24	59	22	59	24	65	29
OTS	41	14	36	28	36	35	32	44	43	42	58	28	46	50
OTS-AECP	91	3	87	4	84	6	82	14	83	11	74	6	88	10
AFROTC	37	18	44	20	39	26	33	42	37	47	42	40	53	33
USMA	61	10	58	9	61	16	50	20	50	22	58	26	62	38
USNA	50	11	47	22	37	31	31	40	42	40	56	28	59	36
OCS	82	7	82	7	86	7	82	10	89	9	89	9	59	21
Total	44	15	47	21	43	26	37	39	43	41	51	33	53	36

[a]The percentages favorable and unfavorable are based on those cases with a career-intent response for that particular year. The Ns given represent the total number of cases with a career-intent response for that year.

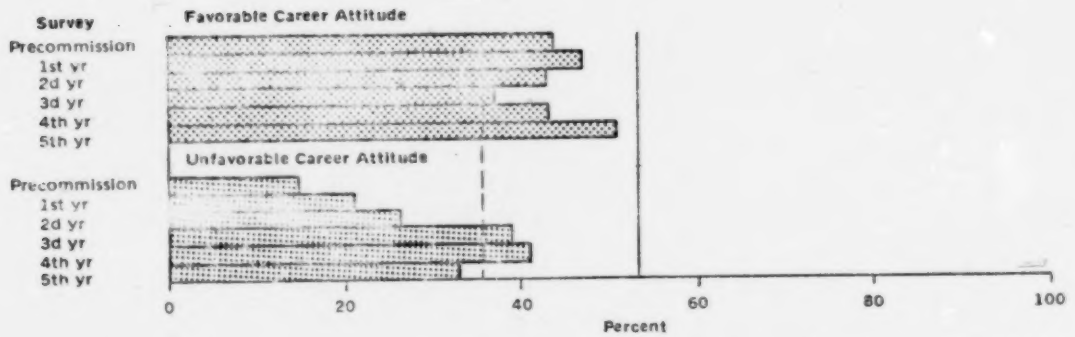


Fig. 1. Percentages of total sample indicating favorable and unfavorable attitudes toward an Air Force career on precommissioning and yearly surveys. (The solid vertical line represents the percentage of the total sample identified as career; the broken vertical line represents the percentage identified as non-career.)

of favorable attitudes, a finding that is consistent with the fact that these sources showed the highest percentage of career subjects. AFA and USMA sources followed a similar pattern in percentage of subjects with favorable attitudes, and USNA, AFROTC, and OTS sources grouped together to form a similar trend.

For those subjects identified as career and non-career, correlations between the career-intent statements in each of the yearly surveys with career status are presented in Table 3. Correlations between yearly career-intent statements and career status were generally lower at all time intervals than correlations between adjacent yearly career-intent statements. In the total sample, the correlation between career-intent statements and career status increased each year: the closer the subject came to the completion of a normal tour, the more reliable this expressed career intent. For instance, in the total sample the correlation between career intent expressed prior to commissioning and career status as of December 1969 was .24. After one year active duty, the correlation between these two factors (career intent and career status) increased to .41. This relationship between expressed career intent and career status increased for each additional year of active duty, except for the fifth year. The decrease in correlation for the fifth-year point in the total sample was probably due to a restriction in range. By this time, the majority of the subjects had completed their normal tour of duty and elected to remain or leave the Air Force. (The number of subjects completing the fifth-year survey was 3,075 compared to the original N of 5,609.) Contrasted with the increase in predictability as the subject approached a decision point, there was a decrease in prediction across time from one year to the next. For instance, the precommission and first-year career-intent statements correlated .60; the precommission and second-year statements .51; the precommission and third-year statements .42. This decrease in prediction across time (values away from the diagonal) and increase in correlation along the diagonal are characteristics of the simplex theory which is commonly found in maturation and learning data. Humphreys (1960) states "... unless the correlations between increments are unity, the correlation between any two measurement occasions will be less than unity and that the further apart the measures are in the series the lower will be the correlation between them. These properties coincide with the descriptive characteristics of the simplex (p. 315)." The simplex phenomenon has been noted in cyclic retesting with the same instrument in that retest correlations drop steadily as time between administrations increases. This phenomenon was exhibited in the intercorrelation matrix showing the relationships between various career-intent statements and between these statements and career status.

The predictability of the career-intent statement prior to commissioning was rather low: .24 for the total sample with a range of .09 to .43 for the individual sources. One may note that there was a greater relationship between intent and career status for sources in which subjects would have had more knowledge of the Air Force at the precommission phase. For example, the correlation between career status and intent at the precommissioning phase was .43 for OCS subjects contrasted with a value of .16 for AFROTC subjects who were still in college when surveyed. It

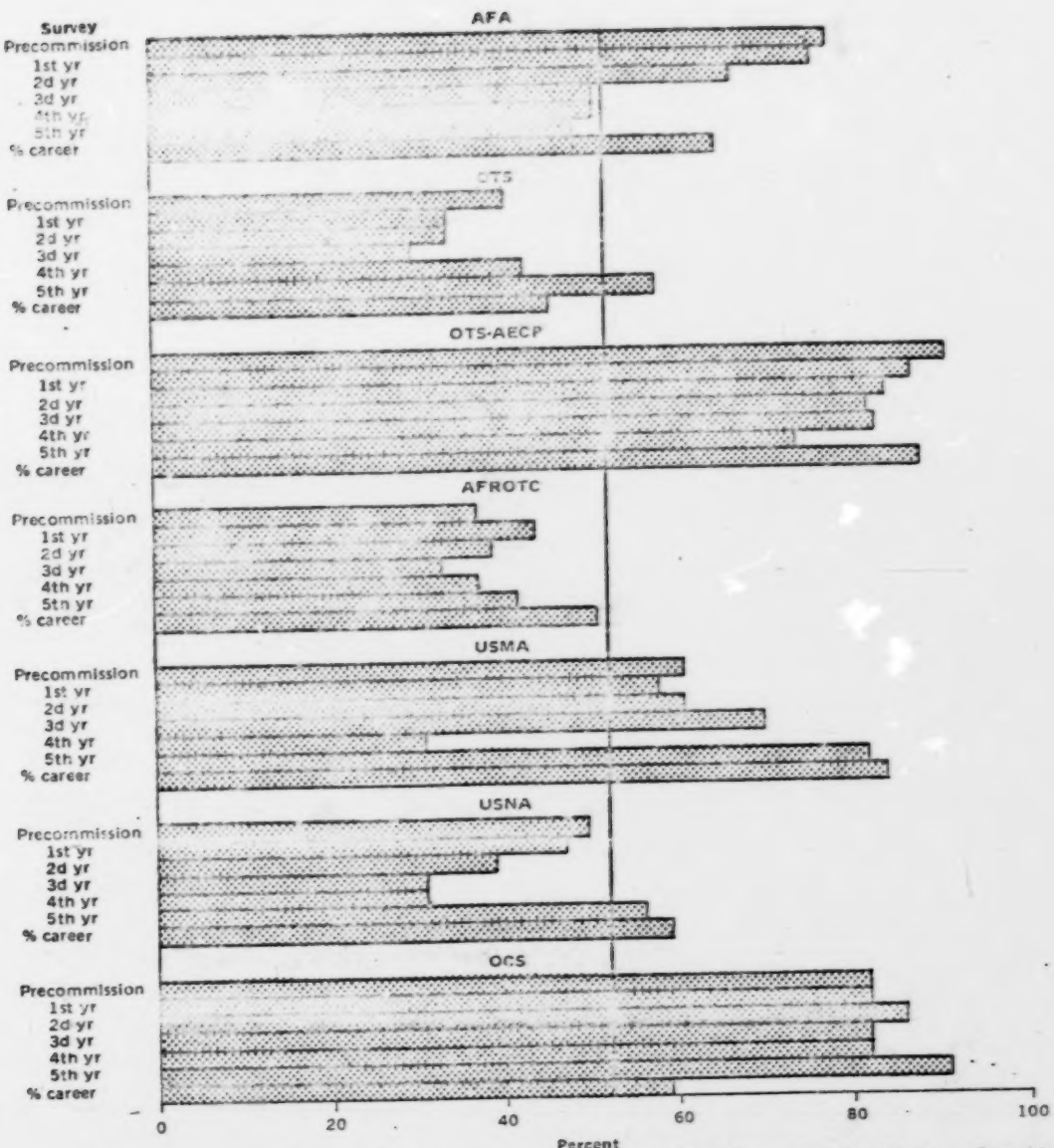


Fig. 2. Percentages of commissioning source subsamples indicating favorable attitudes toward an Air Force career on precommissioning and yearly surveys. (The solid vertical line represents percentage of total sample identified as career. The "% career" bar indicates the percentage of the subsample identified as career as of December 1969).

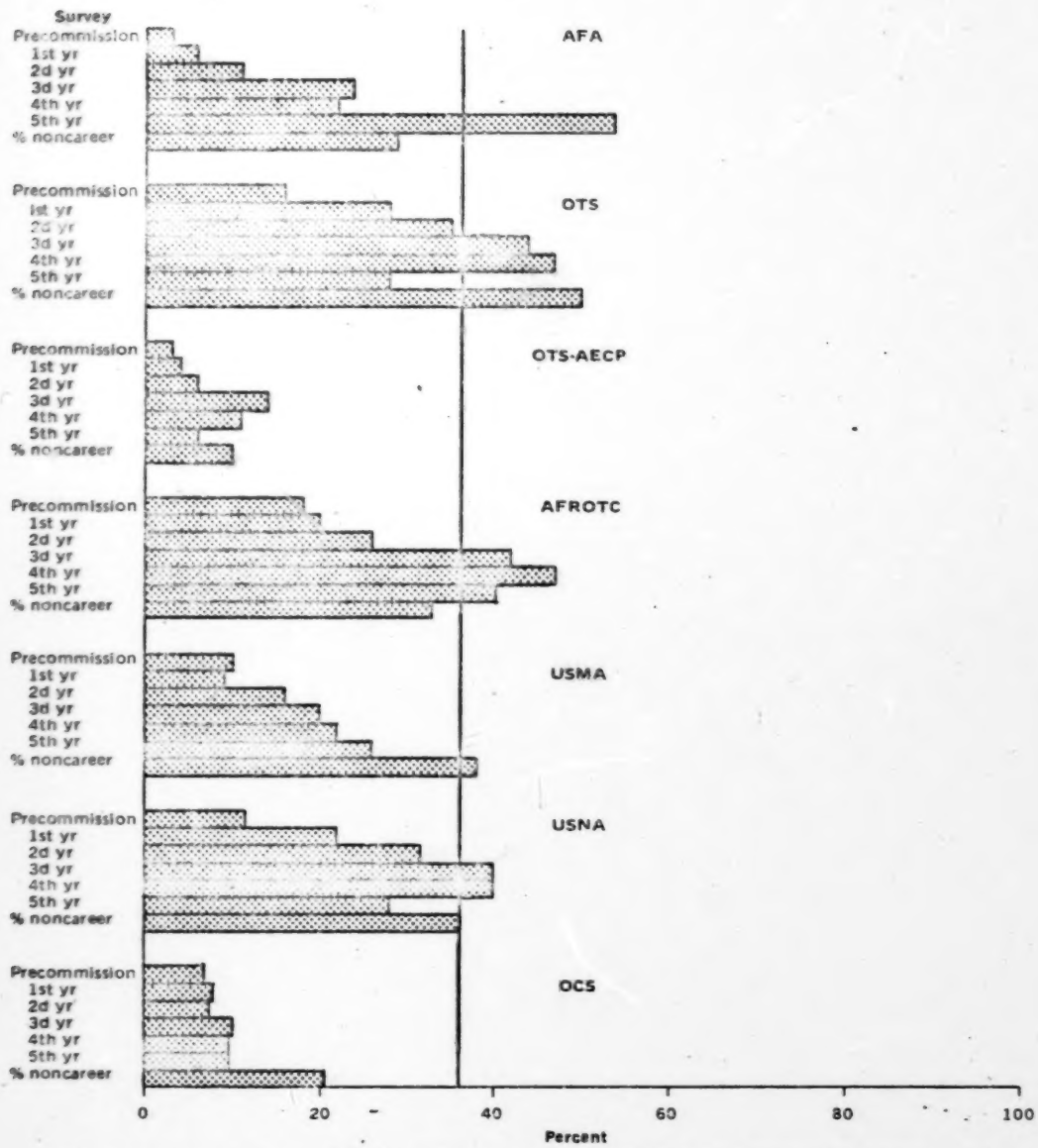


Fig. 3. Percentages of commissioning source subsamples indicating unfavorable attitudes toward an Air Force career on precommissioning and yearly surveys. (The solid vertical line represents percentage of total sample identified as noncareer. The "% noncareer" bar indicates the percentage of the subsample identified as noncareer as of December 1969.)

Table 3. Intercorrelations Between Career-Intent Statements for Surveys Administered at Two Points in Time and Between Career Intent and Career Status as of December 1969

Survey	Correlation between surveys: 1st yr	2d yr	3d yr	4th yr	5th yr	Correlation between career intent and career status	Correlation between surveys: 1st yr	2d yr	3d yr	4th yr	5th yr	Correlation between career intent and career status
	AFA (Precommission N = 442)						**USMA (Precommission N = 48)**					
Precommission	.47	.42	.33	.29	.24	.22	.59	.47	.40	.20	.16	.12
1st yr		.64	.57	.48	.39	.30		.82	.55	.19	.43	.29
2d yr			.67	.57	.38	.37			.73	.36	.35	.29
3d yr				.69	.50	.46				.29	.51	.51
4th yr					.67	.54					.31	.22
5th yr						.66						.51
	OTS (Precommission N = 1,484)						**USNA (Precommission N = 56)**					
Precommission	.59	.46	.42	.37	.26	.32	.55	.36	−.08	.28	.15	.09
1st yr		.66	.57	.47	.35	.39		.68	.30	.35	.41	.41
2d yr			.69	.58	.46	.49			.62	.63	.59	.59
3d yr				.68	.52	.58				.67	.56	.52
4th yr					.72	.72					.72	.66
5th yr						.69						.78
	OTS-AECP (Precommission N = 126)						**OCS (Precommission N = 115)**					
Precommission	.52	.58	.46	.44	.40	.32	.68	.56	.43	.49	.56	.43
1st yr		.79	.59	.64	.63	.41		.87	.66	.53	.51	.56
2d yr			.71	.71	.49	.49			.61	.39	.44	.31
3d yr				.77	.59	.63				.70	.48	.45
4th yr					.74	.79					.63	.48
5th yr						.56						.49
	AFAOTC (Precommission N = 3,338)						**Total Sample (Precommission N = 5,609)**					
Precommission	.56	.47	.38	.35	.29	.16	.60	.51	.42	.41	.33	.24
1st yr		.68	.53	.48	.31	.38		.71	.58	.51	.37	.41
2d yr			.65	.58	.45	.47			.68	.61	.46	.49
3d yr				.73	.60	.54				.73	.58	.55
4th yr					.75	.63					.74	.65
5th yr						.43						.52

is of interest to see that while the correlations between the precommission intent and the criterion were generally low, a substantial increase in prediction for the total sample was obtained after the subjects had completed one year of active duty. Using the precommission career-intent statement alone, a 2.97 percent reduction in error for predicting career status was obtained; based on the first-year active duty career-intent statement, an 8.79 percent reduction in error was obtained. While these percentages (Index of Forecasting Efficiency) are quite small, the values attain more significance when the number of officers involved in various training programs and the cost of these training programs are considered.

To further examine the predictability of the career-intent statements, multiple correlations were computed for various combinations of the yearly career-intent statement. Graphs depicting these multiple correlations between various career-intent statements and career status for the total sample are presented in Figure 4. The Index of Forecasting Efficiency is also shown on the graphs. From examining this chart, one can determine the predictability of the initial career-intent statement and the increase obtained by adding subsequent career-intent statements. For example, the precommission career-intent statement combined with the first-year expressed attitude yielded a multiple R of .41.[4] This result was an increase in prediction over the precommission response; however, the first-year statement alone correlated .41 with career status. In this instance, the precommission career-intent statement did not contribute anything beyond

[4] Tests for significance between multiple Rs were not made since the number of subjects responding to the career-intent statement varied for each year.

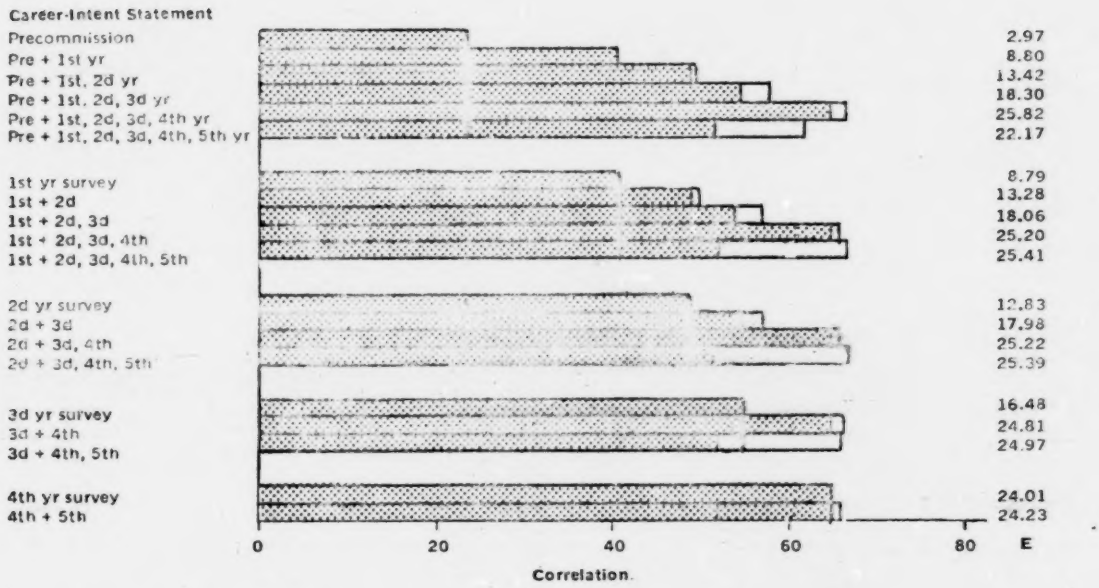


Fig. 4. **Correlations between career-intent statements and career status.**

Explanation

The solid vertical line indicates the correlation between career intent and career status for the initial career-intent statement. For example, for the precommission data, the correlation between precommission career intent and career status was .24. The line represents the gain in prediction for the various yearly career intent statement combinations given below. The total length of the bar represents the multiple correlation between the specified career-intent statements and career status. The shaded portion of the bar represents the increase in prediction over that obtained by using the last career-intent statement in the multiple prediction. For instance, for the precommission data, the first-year career-intent statement correlated .41 with career status. In this instance, there was no increase in prediction when the precommission and first-year career-intent statements were both used to predict career status over that obtained by using the first-year career-intent statement alone. However, when the precommission, first- and second-year career-intent statements were all used to predict career status, the multiple correlation was .50 while the second-year career-intent statement alone was .49, an increase of .01.

variance accounted for in the first-year statement. The prediction for each individual career-intent statement increased as length of service increased. The maximum multiple R (.67) in this set was obtained using the precommission through the fourth-year career-intent statements; however, this figure shows only a slight increase in the variance beyond the contribution of the fourth-year statement alone. These graphs, illustrating the point that the individual's attitude is more reliable as he approaches a decision point, show the increase in prediction obtained from one year to the next.

IV. CONCLUSIONS

Of the original 5,609 subjects in the sample who entered the Air Force during 1963 and 1964, 53 percent were on active duty as of December 1969. Thirty-six percent of these subjects were confirmed losses to the Air Force. The remaining subjects were classified inactive or unknown. Subjects entering the Air Force through the OTS-AECP and OCS programs showed the highest retainability at this point. The various military academies generally represented the next highest retention rates, followed by AFROTC and OTS.

Although correlations between the precommission expressed career intent and the criterion of career or noncareer status were generally low, there was a substantial increase in prediction obtained after the subjects had completed one year of active duty.

Additional research will determine what factors, if any, are predictive of career intent and career decision. An attempt will be made to answer several questions: For instance, is it possible or practical to create a career predictability scale for use in early selection of candidates for the various officer training programs? And, do such factors as type of assignment received, educational training, and job satisfaction influence career decisions and eventual retention? Detailed analyses will include such comparisons as Duty Air Force Specialty versus college major, changes in marital status, regular or reserve status, and aeronautical rating. In addition, each of the survey items will be compared with career status. The file will be updated periodically to determine changes in career and noncareer groups.

REFERENCES

Ewing, F. *USAF officer career intent after first year of active duty*. PRL-TR-67-10, AD-664 037. Lackland AFB, Tex.: Personnel Research Laboratory, Aerospace Medical Division, August 1967.

Ewing, F., & Alvord, R.W. *USAF officer career decisions: Predictability of initial career intent*. PRL-TR-65-2, AD-613 333. Lackland AFB, Tex.: Personnel Research Laboratory, Aerospace Medical Division, February 1965.

Humphreys, L.G. Investigations of the simplex. *Psychometrika*, 1960, 25(4), 313-323.

Shenk, F. *Career indications among junior officers*. AFHRL-TR-69-33, AD-703 728. Lackland AFB, Tex.: Personnel Research Division, Air Force Human Resources Laboratory, September 1969.

Shenk, F. *Changes in career intent during initial tour of active duty*. AFHRL-TR-70-49, AD-722 408. Lackland AFB, Tex.: Personnel Division, Air Force Human Resources Laboratory, December 1970.

NTIS Best Sellers

Recent reports of wide interest from the National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22151. Sales telephone: 703 321-8543.

☐ **The U.S. Energy Problem, Volume I**

G. C. Szego, InterTechnology Corp., Warrenton, Va., November 1971. 83 pages.

Summarizes the energy problem with pertinent information concerning the effects of the energy crisis on transportation, communication, production, housing and other aspects of the economy. Also available: Volume II, Part A, Appendices A through G including Energy Status, Cost Trade Off Analysis, Residential Energy Analysis, Nuclear Energy, with 53 figures and tables (PB-207 518, $12.50), and Volume II, Part B, Appendices H through U including Off-Peak Power Storage Systems, Electrochemical R&D, Transportation, Energy & Environment, Energy-Related Minerals, more than 100 figures and tables (PB-207 519, $12.50). All three books available as set at special price of $20.

PB-207 517 PC$4.85/MF$0.95

☐ **Energy Research Needs**

Sam H. Schurr, Resources for the Future, Inc., Washington, D.C. October 1971. 893 pages.

Tells where research should be directed to improve understanding of the long-term U.S. energy problem and to create effective policies. In-depth coverage of: the forces that influence consumption; the future of domestic mineral fuel reserves; research and development possibilities in energy production and use; the environmental impacts of energy production and utilization activities; and the public policies which significantly affect energy industry operations.

PB-207 516 PC$13.50/MF$0.95

☐ **Recycling and Ecosystem Response: Special Study on Recycling and Ecosystem Response to Water Manipulation**

H. K. Stevens, T. C. Bahr, and R. A. Cole, Institute of Water Research, Michigan State University, East Lansing, February 1972. 135 pages.

Reviews the literature on ecosystem response to water manipulation and emphasizes the need for recycling. Makes management recommendations and identifies areas for future research. Topics covered include: current ecosystem concepts; the role of materials recycling in ecosystem function; North American Watersheds; ecosystem stability and human manipulation; and the role of technology.

PB-208 669 PC$5.45/MF$0.95

Biomedical Engineering

☐ **Multiphasic Health Testing/Screening Systems: State of the Art**

Anna C. Gelman, American Health Foundation, Inc., New York. December 1970. 164 pages.

This annotated bibliography searches the voluminous literature on multiphasic testing to determine the rationale for its increased use, the present state of the art, and the tests and procedures still being validated. It contains articles and tests related to preventive examinations; sources of data; long-term studies of multiphasic screening practice; biochemical screening; periodic health examination; evaluation; methods; attitudes; health economics; analyses of screening programs; cost analysis. Appendices include interviews with national and international authorities; a test usage table and author index.

PB-196 651 PC$3.00/MF$0.95

☐ **The Use of Computers in Hospitals**

Herner and Co., Washington, D.C., November 1970. 137 pages.

Analyzes detailed questionnaires from 1,200 hospitals on the use of computers in hospitals and other medical facilities. Principal applications reviewed are: administrative and financial; operational procedures (cost analysis, inventory); medical and medical research; and applications involving remote terminals. Also includes reviews of principal applications.

PB-195 629 PC$3.00/MF$0.95

◆ ***Please order by number—and speed your delivery.***

☐ **Provisional Guidelines for Automated Multiphasic Health Testing and Services, Volume I**

The National Center for Health Services Research and Development, Rockville, Md., 1970. 43 pages.

This is the first of three volumes and contains provisional guidelines for planners of Automated Multiphasic Health Testing and Services. (AMHTS is the use of automated tests and measures to detect probable early disease and consequent diagnostic examinations and services.)

☐ Vol. II, available as PB-196 000, $3.00, contains operational principles, and Vol. III, available as PB-207 230, $6.00 presents the proceedings of the Invitational Conference on AMHTS, Washington, D.C., Jan. 21-23, 1970. The purpose of the study is to determine the feasibility of adopting AMHTS to Federal health programs by conducting long-term epidemiological, biomedical, economic behavioral and technologic investigations.

PB-195 654 PC$3.00/MF$0.95

● ORDER ON REVERSE.

☐ **Scientific Design of a Hospital Training System,** by Rosalie Kasaba and Becky Abato, Holy Cross Hospital, San Francisco, Calif., July 1971. 178 pages.

This study proposes that hospitals codify jobs and provide the in-house training to fill them. It defines the total hospital functional structure and identifies its work components. The report gives standards, methods for measuring performance and training programs to meet measured needs.

PB-201 405 PC$3.00/MF$0.95

Materials Sciences

☐ **Compatibility of Explosives with Polymers, III**

Norman E. Beach and Vincent K. Canfield, Plastics Technical Evaluation Center, Dover, N.J. January 1971. 87 pages.

Records compatibility testing of polymers and explosives during 1969-70. Presents the information in two ways, by generic name or trade name of the plastic and by explosive. The reader can quickly scan the information to see what explosives a plastic is compatible with and what plastics can be used safely with a particular explosive. Adhesives and elastomers are also included.

AD-721 004 PC$3.00/MF$0.95

☐ **Minimum Needs for Airport Firefighting and Related Materials**

Bert M. Cohn and John A. Campbell, Gage-Babcock and Associates, Inc., Westchester, Ill., January 1971. 97 pages.

Presents minimum standards for airport fire fighting and rescue services for different categories of airports serving CAB certified air carriers. Recommendations for minimum requirements include: quantities and application rates for fire extinguishing agents, number of vehicles to transport the agents, vehicle response times, manning and other related elements which comprise these services.

AD-720 512 PC$3.00/MF$0.95

☐ **Transoceanic Cargo Study, Volume I: Forecasting Model and Data Base**

Planning Research Corp., Los Angeles, Calif., March 1971. 565 pages.

Describes the three methods used for forecasting: exponential smoothing and trend extrapolation; functional forecasting; share-of-the-market forecasting. Contains updating procedures and forecast results of Transport Homogeneous Groups. Also gives the trade histories and histories of the appropriate explanatory variable.

PB-201 040 PC$6/MF$0.95

☐ **Transoceanic Cargo Study, Volume II: Distribution Costs and Productivities of Transoceanic Transport Technologies,** March 1971. 174 pages.

Gives the costs and productivities of the transoceanic transport technologies for the years 1970-1980. Includes the B-747H/L-500 type jumbo cargo aircraft for the air mode and representative configurations of Bulkers, Tankers, Container Ships, Break-Bulk Ships and Barge Carriers for the ocean mode. Also considers inland modes and peripheral costs.

PB-201 041 PC$3/MF$0.95

☐ (Volume III: Computer Programs, Documentation: Demand Forecasting Model and Distribution Costs and Productivities Model, is also available as PB-201 042. $6.00.)

☐ **Special Study: Risk Concepts in Dangerous Goods Transportation Regulations,** National Transportation Safety Board, Washington, D.C., January 1971, 41 pages.

Examines the salient approaches underlying the development of existing Federal regulations on the movement of dangerous goods through transportation channels. Discusses problems and needs which must be met by new approaches. Also recommends the development and speedy adoption of a risk-based framework for future dangerous goods regulations.

PB-198 264 PC$3.00/MF$0.95

All books available in microfiche. Check box below.

Please order by number—and speed your delivery.

Fill out and return now to: **National Technical Information Service**
U.S. Department of Commerce, Springfield, Va. 22151

☐ Send the titles I have indicated above in microfiche. 95¢ each.
☐ Send the titles I have indicated above in paper copy.
☐ Send me your free brochure NTIS INFORMATION SERVICES.
☐ Charge my NTIS Account No. _____.
☐ Bill me (Not applicable to foreign customers). Add 50¢ per title.
☐ Here is my check for _____.

NAME _____

TITLE _____ ORGANIZATION _____

ADDRESS _____

CITY, STATE, ZIP _____